WHAT IS CLAIMED IS:

1. A liquid-crystal driving circuit that generates image data from gray-scale values of an input image made up of a series of frames, the image data determining voltages applied to a liquid crystal to display the input image, the liquid-crystal driving circuit comprising:

an encoding unit for encoding a present image corresponding to a frame of the input image and outputting an encoded image corresponding to the present image;

a first decoding unit for decoding the encoded image and outputting a first decoded image corresponding to the present image;

a delay unit for delaying the encoded image for an interval corresponding to one frame;

a second decoding unit for decoding the delayed encoded image and outputting a second decoded image;

a compensation data generator for generating compensation data for adjusting the gray-scale values in the present image according to the first decoded image and the second decoded image; and

a compensation unit for generating said image data according to the present image and the compensation data.

2. The liquid-crystal driving circuit of claim 1, wherein the compensation data cause the liquid crystal to reach transmissivity values corresponding to the gray-scale values of the present image within substantially one frame interval.

3. The liquid-crystal driving circuit of claim 1, wherein the compensation data generator includes a data conversion unit for reducing the number of bits with which the gray-scale values of at least one of the first decoded image and the second decoded image are quantized.

4. The liquid-crystal driving circuit of claim 3, wherein the compensation data generator further includes:

a unit for generating first internal compensation data and second internal compensation data, using the decoded image quantized with the reduced number of bits; and

a compensation data interpolation unit for calculating the compensation data by interpolation from the first internal compensation data and the second internal compensation data.

5. The liquid-crystal driving circuit of claim 1, wherein the compensation data generator includes:

an error decision unit for detecting differences between the first decoded image and the present image; and

a limiting unit for limiting the compensation data according to the detected differences.

6. The liquid-crystal driving circuit of claim 1, wherein the compensation data generator includes:

an error decision unit for detecting differences between the first decoded image and the present image; and

a data conversion unit for adding the detected differences to the first decoded image and the second decoded image.

7. The liquid-crystal driving circuit of claim 1, further comprising a band-limiting unit for attenuating a predetermined frequency component included in the present image, the encoding unit encoding the output of the band-limiting unit.

8. The liquid-crystal driving circuit of claim 1, further comprising a noise rejection unit for attenuating a noise

component included in the present image, the encoding unit encoding the output of the noise rejection unit.

9. The liquid-crystal driving circuit of claim 1, further comprising a color-space transformation unit for converting the present image to luminance and chrominance signals, the encoding unit encoding the luminance and chrominance signals.

10. A liquid-crystal driving circuit that generates image data from gray-scale values of an input image made up of a series of frames, the gray-scale values being quantized with a certain number of bits, the image data determining voltages applied to a liquid crystal to display the input image, the liquid-crystal driving circuit comprising:

a data conversion unit for reducing the number of bits with which the gray-scale values of a present image corresponding to a frame of the input image are quantized, thereby generating a first image corresponding to the present image;

a delay unit for delaying the first image for an interval corresponding to one frame and outputting a second image;

a compensation data generator for generating compensation data for adjusting the gray-scale values in the present image according to the first image and the second image; and

a compensation unit for generating said image data according to the present image and the compensation data.

11. The liquid-crystal driving circuit of claim 10, wherein the compensation data cause the liquid crystal to reach transmissivity values corresponding to the gray-scale values of the present image within substantially one frame interval.

12. A liquid-crystal driving circuit that generates image data from gray-scale values of an input image made up of a series of frames, the image data determining voltages applied to a liquid crystal to display the input image, the liquid-crystal driving circuit comprising:

an encoding unit for encoding a present image corresponding to a frame of the input image and outputting a first encoded image corresponding to the present image;

a delay unit for delaying the first encoded image for an interval corresponding to one frame and outputting a second encoded image;

a first decoding unit for decoding the second encoded image and outputting a decoded image corresponding to a preceding frame of the input image;

a compensation data generator for generating compensation data for adjusting the gray-scale values in the present image according to the present image and the decoded image; and

a compensation unit for generating said image data according to the present image and the compensation data.

13. The liquid-crystal driving circuit of claim 12, wherein the compensation data cause the liquid crystal to reach transmissivity values corresponding to the gray-scale values of the present image within substantially one frame interval.

14. The liquid-crystal driving circuit of claim 12, wherein the compensation data generator includes a limiting unit for setting the value of the compensation data to zero when the first encoded image and the second encoded image are identical.

15. The liquid-crystal driving circuit of claim 12, further comprising a second decoding unit for decoding the first

encoded image and outputting a decoded image corresponding to the present image, wherein the compensation data generator includes:

an error decision unit for detecting differences between the present image and the decoded image corresponding to the present image; and

a data correction unit for adding the detected differences to the decoded image corresponding to the preceding frame of the input image.